

### ABSTRACT OF THE DISCLOSURE

The present invention provides methods of determining aggregation of  $\alpha$ -synuclein, which are a hallmark of Lewy body diseases such as Parkinson's disease.

- 5 Also disclosed are inhibitors of the aggregation, including magnesium and  $\alpha$ -synuclein binding peptides. The inhibitors are useful in the treatment of Lewy body diseases.

09901187.070901